



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D350-636-011
Job Sheet 167063



Part No: D350-636-011

Job Qty: 1 ea

Part Name: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 10/23/17

Job Tracking No:

Due Date: 11/10/17

Created By: Victoria Michaud-Febrille

Type: Stock

Description:

Customer: Heli-Fix Maintenance Inc (CHFIX01)

252 Edouard Drouin St Jerome, QC, J7Y 4X5 Canada ph:(450) 712-3955

Note: European warehouse

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time
90	Start up Operation	1 Ea		11/9/17	0.00	0.00	Start Up Skidtubes	
110	Skidtubes	1 pcs		11/9/17	0.00	4.55	Skidtubes	BE 17.11.13
120	QC	1 pcs		11/9/17	0.00	0.00	QC10	PD 17.11.13
130	QC	1 pcs		11/9/17	0.00	0.00	QC5	BE 2017/11/14
140	HandFinish	1 pcs		11/9/17	0.00	0.93	HandFinish1	BE 2017/11/14
150	QC	1 pcs		11/9/17	0.00	0.00	QC7	BE 2017/11/14
160	Skidtubes	1 pcs		11/9/17	0.00	4.55	Skidtubes	BE 2017/11/14
170	QC	1 pcs		11/9/17	0.00	0.00	QC10	BE 2017/11/14
180	QC	1 pcs		11/9/17	0.00	0.00	QC5	BE 2017/11/14
190	HandFinish	1 pcs		11/9/17	0.00	0.93	HandFinish2	2017-11-24 JSC
200	SprayPaint	1 pcs		11/9/17	0.00	0.53	Spray Paint	AB 1 JAN 15 2018
210	QC	1 pcs		11/9/17	0.00	0.00	QC14	BE 18/01/18
230	HandFinish	1 pcs		11/10/17	0.00	0.93	HandFinish4	DAS 38
240	QC	1 pcs		11/10/17	0.00	0.00	QC5	BE 2017/11/14
250	Packaging	1 pcs		11/10/17	0.00	0.00	Packaging1	BE 2017/11/14
260	QC	1 pcs		11/10/17	0.00	0.00	QC4	BE 2017/11/14
265	DC	1 pcs		11/10/17	0.00	0.00	DC	BE 2017/11/14
270	Packaging	1 pcs		11/10/17	0.00	0.00	Packaging3	BE 2017/11/14
280	QC21-FG	1 Ea		11/10/17	0.00	0.00	QC21	BE 2017/11/14

Part Op 110 - 1-Pick D2600-3 Bent 2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg
Descriptions: D2750 3- Drill pilot holes for blade fitting bolt holes using DT8983. Start with 3/16", then open to 0.500" using center drill then ream holes using 0.500" reamer. PIN first side. Repeat process on second side. ***ENSURE PROPER POSITIONING FWD BEND MUST BE FACING UP WHEN DRILLING FIRST SIDE*** Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for 2nd side only DT8863B for first side (detail B) 4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 6-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 7-Open up holes of Detail A to 0.297" (total of 2 holes per side) 8-Weld D2744 Cap as per Dwg D2750 and QSI 004.Fill grooves in bend left from bending as per QSI 004
160 - 1-Open up holes using hole saw of Detail C and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2-Open up holes using hole saw of Detail B to 0.750" (total of 4 holes per side) 3- Open float hole using un-bit to 0.500" (4 per side) 4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750 (welding instructions on sheet 8) 5-Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7-Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R exp. date: 11/30/17 ***ATTN: USE I-BEAM

DQ: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐



Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐		AGAINST DEPARTMENT/PROCESS Cross tube ☐ Water Jet ☐ Engineering ☐																																																																																																	
Date: _____	Step #: _____	Description Work Order Deviation		QTY Effect																																																																																																			
Root Cause <table border="1"> <tr> <td>Environment</td> <td></td> <td>No Re-verification</td> <td></td> <td>Pressure/Forced</td> <td></td> <td>Temperature/Cur</td> <td></td> </tr> <tr> <td>Design</td> <td></td> <td>Operator</td> <td></td> <td>Bending</td> <td></td> <td>Set-up</td> <td></td> </tr> <tr> <td>Doc/Data</td> <td></td> <td>Offset/Setup</td> <td></td> <td>Centre Not Concentric</td> <td></td> <td>BOM/Route</td> <td></td> </tr> <tr> <td>Equip/Tooling</td> <td></td> <td>Supplier</td> <td></td> <td>Cracks</td> <td></td> <td>Broken/Damage/I</td> <td></td> </tr> <tr> <td>Handling/Pre</td> <td></td> <td>Training</td> <td></td> <td>Crimp/Kink/Ripple/Wave</td> <td></td> <td>Inspection Incom</td> <td></td> </tr> <tr> <td>Material</td> <td></td> <td>Use for Testing</td> <td></td> <td>Cuffs</td> <td></td> <td>Contamination</td> <td></td> </tr> <tr> <td>Internal Transport</td> <td></td> <td>Poor Information</td> <td></td> <td>Crushing</td> <td></td> <td>Countersink</td> <td></td> </tr> <tr> <td>Tribal Knowledge</td> <td></td> <td>Rushing</td> <td></td> <td>Heat Treat</td> <td></td> <td>Cut Too Short</td> <td></td> </tr> <tr> <td>LOA</td> <td></td> <td>Product Improvement</td> <td></td> <td>Wave/Twist in Tube</td> <td></td> <td>Instructions Incor</td> <td></td> </tr> <tr> <td>Substation</td> <td></td> <td>Process Improvement</td> <td></td> <td>Marks/Chatter</td> <td></td> <td>Drill Holes</td> <td></td> </tr> <tr> <td>Past Expiry Date</td> <td></td> <td>Manufacturing Process</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Misidentified</td> <td></td> <td>Past Due</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				Environment		No Re-verification		Pressure/Forced		Temperature/Cur		Design		Operator		Bending		Set-up		Doc/Data		Offset/Setup		Centre Not Concentric		BOM/Route		Equip/Tooling		Supplier		Cracks		Broken/Damage/I		Handling/Pre		Training		Crimp/Kink/Ripple/Wave		Inspection Incom		Material		Use for Testing		Cuffs		Contamination		Internal Transport		Poor Information		Crushing		Countersink		Tribal Knowledge		Rushing		Heat Treat		Cut Too Short		LOA		Product Improvement		Wave/Twist in Tube		Instructions Incor		Substation		Process Improvement		Marks/Chatter		Drill Holes		Past Expiry Date		Manufacturing Process						Misidentified		Past Due						OTHER : _____			
Environment		No Re-verification		Pressure/Forced		Temperature/Cur																																																																																																	
Design		Operator		Bending		Set-up																																																																																																	
Doc/Data		Offset/Setup		Centre Not Concentric		BOM/Route																																																																																																	
Equip/Tooling		Supplier		Cracks		Broken/Damage/I																																																																																																	
Handling/Pre		Training		Crimp/Kink/Ripple/Wave		Inspection Incom																																																																																																	
Material		Use for Testing		Cuffs		Contamination																																																																																																	
Internal Transport		Poor Information		Crushing		Countersink																																																																																																	
Tribal Knowledge		Rushing		Heat Treat		Cut Too Short																																																																																																	
LOA		Product Improvement		Wave/Twist in Tube		Instructions Incor																																																																																																	
Substation		Process Improvement		Marks/Chatter		Drill Holes																																																																																																	
Past Expiry Date		Manufacturing Process																																																																																																					
Misidentified		Past Due																																																																																																					

Dart Aerospace Ltd.
 1270 Aberdeen Street
 Hawkebury, ON K64 1K7
 CANADA
 TEL.: 1 613 632-5200
 Email: sales@dartaero.com
 www.dartaerospace.com

DART
 AEROSPACE
S008345



Skidtube LH, Std Wearplates, DART (Apical)
 Cylindrical/Aerazur Float Comp.

PART NO: D350-636-011

Revision:

Operation: Start up Operation

Change No:

Mfg Date: 11/09/17
Job No: 167063

A/K MK 1133

LOCATION AID (BLADE FITTING)*** 8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 8) A/R 9- At section AJ-AJ drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11-Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12-Debur holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 137670 Paint 138714

210 - Inspect for foreign object per QSI 024

230 - 1- Install inserts as per Dwg D2750 2-Inspect for Foreign Objects 3- Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: 1138654 EXP DATE: 18/04 4- Assemble o'ring to plug as per dwg D3492 and apply o'ring lube 5- Coat all exposed fasteners with "LPS Procyon" batch: 1133690

260 - *****ensure antiseize is on AN8C21A bolts*****

265 - record fwd angle: 89.4° Photocopy blue file and type labels per PPP D350-636-011 CHG 007

270 - Package as per PPP D350-636-011 Location : FG072

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	D2600-3-BENT-LH ✓ <u>161684</u>	1	2	0	0
	D2744 ✓ <u>5003318</u>	1	0	0	0
160-Skidtubes	ALS4-1032-225 <u>FM135998-2</u>	38	906	0	0
	D2739 <u>B165439</u>	1	15	0	0
	D2743 <u>B160400</u>	8	126	0	0
	D3490-1 <u>B160394</u>	4	33	0	0
	D3490-3 <u>B165398</u>	4	20	0	0
230-HandFinish	AN3C5A <u>S019396</u>	34	205	0	0
	AN3C6A <u>FM137361-1</u>	4	100	0	0
	AN6C44A <u>FM137055-1</u>	4	259	0	0
	AN8C35A <u>FM137203</u>	1	101	0	0
	D2745 <u>S000390</u>	8	108	0	0
	D3488-041 <u>F165344</u>	1	11	0	0
	D3492-1 <u>F165386</u>	8	75	0	0
	D3492-3 <u>F165369</u>	8	117	0	0
	D3535-25 <u>S002566</u>	1	8	0	0
	D3536-25 <u>S031897</u>	1	12	0	0
	D3537-1 <u>S025923</u>	3	58	0	0
	D3631-1 <u>S008168</u>	8	20	0	0
	D3791-1 <u>F165657</u>	1	9	0	0
	D3793-1 <u>F165</u>	1	12	0	0
	D3793-3 <u>F159871</u>	1	7	0	0
	D3794-1 <u>M163497-123</u>	1	3	0	0
	D3794-3 <u>F165210</u>	1	14	0	0
	MS21043-6 <u>FM138414-39</u>	4	74	0	0
	MS21083C8 <u>FM138238-1</u>	1	9	0	0
	NAS1149C0332R <u>S027570</u>	38	4,666	0	0
	NAS1149C0832R <u>FM135536-1-0</u>	1	20	0	0
	NAS1515H3L <u>FM137361-25</u>	4	230	0	0
	NAS1611-010 <u>FM138441-2</u>	8	139	0	0
	NAS1611-013 <u>S022099</u>	8	33	0	0
250-Packaging	AN8C21A <u>S034112</u>	2	239	0	0
	D2741 <u>S034109</u>	1	72	0	0
	D3493-1 <u>S034103</u>	2	74	0	0
	D3532-1 <u>S034102</u>	2	15	0	0
	MS21083C8 <u>S034101</u>	2	9	0	0
	NAS1149D0863J <u>S034100</u>	2	209	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube ☐</td> <td style="width:12.5%;">Cross tube ☐</td> <td style="width:12.5%;">Water Jet ☐</td> <td style="width:12.5%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																		
Description Work Order Deviation				Disposition																					
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :																							
Misidentified ☐	Past Due ☐																								

5. 7. 7

Part Number: D350-636-011/-011GB/-012/-012GB

Description: SKIDTUBE STD LH/RH, FLOAT COMPATIBLE

[illegible]



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Inventory

Operation Number	Operation	Serial Number	Job	Quantity	Weight	Original Serial Number	Location	Container	Status	Added	Special Comments	Label	Supplier	Change No
Part Number: D2741 Revision: Replacement Blade														
230	QC21-SA	S034109	167063	1 Ea	0	163260	Packaging1		Stock	1/22/2018	Issue Container			
Operation Totals:		1		1	0									
Part Totals:		1		1	0									
Part Number: D350-636-011 Revision: Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.														
280	QC21-FG	S008345	167063	1 Ea	0	S008345	FG073	Bin	Stock	11/9/2017	Issue Container			
Operation Totals:		1		1	0									
Part Totals:		1		1	0									
Totals:		2		2	0									

Plex 1/22/2018 12:34 PM Dart.Lajeunesse.Marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								